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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,115	09/22/2003	Yoshinobu Utsumi	Q77538	5422
23373	7590	11/14/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			SCHEUERMANN, DAVID W	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 11/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

EL

Office Action Summary	Application No.	Applicant(s)	
	10/665,115	UTSUMI ET AL.	
	Examiner	Art Unit	
	David W. Scheuermann	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 21 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,7 and 10 is/are pending in the application.
- 4a) Of the above claim(s) 2,3,5,6,8 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,7 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9/05
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments filed on 8/15/2005 have been fully considered but they are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Youshinobu, JP 2002084724 in view of Mimura, JP 02099399. Youshinobu, JP 2002084724 shows:

An electric rotating machine for a vehicle (see figure 1) comprising: a rotor core 6 that is fitted to a rotary shaft 12; a stator core 3 that is concentric with said rotor core and disposed on the outside of said rotor core; and a turning angle detector 20 that is disposed at one shaft end of said rotary shaft;

[said rotary shaft itself is constituted to be magnetic flux interrupting means made of a non-magnetic material,] for interrupting leakage flux passing onto said rotary shaft as a result of excitation of a rotor coil 10 wound on said rotor core.

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Youshinobu, JP 2002084724 does not expressly disclose the bracketed material. Mimura, JP 02099399 discloses use of non-magnetic shaft for the purpose of preventing cross talk, see abstract. It would have obvious to review both these references simultaneously since they both address the problem of noise generated in position detectors or rotary resolvers by stray magnet field traversing the shaft of a rotary electric machine. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to make the entire shaft of Youshinobu, JP 2002084724 out of non-magnetic material. One of ordinary skill in the art would have been motivated to do this to prevent or reduce cross talk as well as simplify design by replacing the high multiple-part reluctance portions 32, and 33 of Youshinobu, JP 2002084724, with a single shorter shaft to achieve the same ends. With the limited space in present vehicles, any reduction in size would be most appreciated by those skilled in the art.

As to claim 10, note that Youshinobu, JP 2002084724 refers to rotation angle or position detector 20 in the abstract, which is functionally equivalent to a resolver.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Youshinobu, JP 2002084724 and Mimura, JP 02099399 in view of Kitazawa, JP 09065617. The combination of Youshinobu, JP 2002084724 and Mimura, JP 02099399 discloses the invention substantially as claimed as set forth in the rejection of claim 1, supra. The combination of Youshinobu, JP 2002084724 and Mimura, JP 02099399 does not expressly disclose, "...wherein a high-permeability magnetic bypass member is disposed between said rotor core and said turning angle

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detector.” Kitazawa, JP 09065617 discloses a magnetic bypass member is disposed between said magnetic core and said turning angle detector, for the inherent purpose of improving signal strength by reducing interference. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to place a high-permeability magnetic bypass member between the rotor core, which contains a magnetic core, and the turning angle detector or resolver in the combination of Youshinobu, JP 2002084724 and Mimura, JP 02099399. One of ordinary skill in the art would have been motivated to do this improve the signal strength and reduce noise in the resolver by reducing stray magnetic fields.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Youshinobu, JP 2002084724 and Mimura, JP 02099399 in view of Maestre, US 5300884. The combination of Youshinobu, JP 2002084724 and Mimura, JP 02099399 discloses the invention substantially as claimed as set forth in the rejection of claim 1, supra. The combination of Youshinobu, JP 2002084724 and Mimura, JP 02099399 does not expressly disclose, “...wherein said turning angle detector is a resolver having corrugations formed on a curved outer surface of said resolver.” Maestre, US 5300884 discloses a resolver having corrugations formed on a curved outer surface of said resolver, for the inherent purpose of improving signal strength. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use a resolver having corrugations formed on a curved outer surface of said resolver in the combination of Youshinobu, JP 2002084724 and Mimura,

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JP 02099399. One of ordinary skill in the art would have been motivated to do this improve the signal strength and reduce noise.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

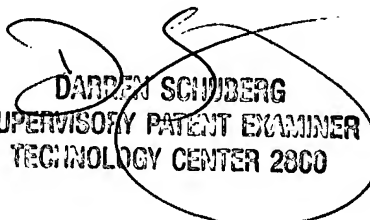
Any inquiry concerning this communication or earlier communications from the examiner should be directed to David W. Scheuermann whose telephone number is (571) 272-2035. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached at (571) 272-2044. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



dws
October 28, 2005



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